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## AGRICULTURAL EDUCATION

UNITED STATES BUREAU OF EDUCATION. STATE DEPART-  
MENTS OF EDUCATION. STATE LEGISLATION

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UNITED STATES BUREAU OF EDUCATION

Agricultural education receives the attention of the Bureau of Education in several ways. These may conveniently be grouped under three heads: publications, land-grant colleges, and legislation.

Having little administrative authority except that relating to land-grant colleges the Bureau has confined its efforts mainly to its publications and correspondence. "No other educational office of the world has done so extensive literary work as this office," is the fine tribute paid by the Royal Prussian Commission of 1904 in its report to the Prussian Parliament. The Bureau's publications consist of annual reports, special reports, circulars of information, and bulletins.

The policy of the bureau toward agricultural education recently expressed by the commissioner applies especially to its publications:

It can do its best I think as a co-ordinating influence. It can bring to the notice of less favored institutions information concerning the experience of more advanced institutions. It can call attention from time to time to the relation of agricultural education to general education. It can survey the educational field and possibly point out dangers to be averted or weak places to be strengthened. It can, finally, discover things that need doing and are not attended to by any other agency, and can see that some part of such lack is supplied. So much as this I hope the Bureau of Education may be able to do for agricultural education. And so much as this, I may say, it will undertake to do as far as its resources will permit (18, p. 53).

The Bureau has done much already in two ways: one by bringing to American educators the work of foreign countries, and the other by reviewing the work being done in various parts

of this country. Of the former the most important are the accounts of agricultural education in Austria, Belgium, Canada, France, Germany, Great Britain, and Prussia. One of these publications on school gardens, deserves special mention (19). It contains a very complete historical account of school gardens and has been extensively quoted in the school-garden literature of this country. Of the reviews of work in our own country two are noteworthy. One written at the beginning of the movement for instruction in elementary agriculture is made up chiefly of reprints of leaflets from Purdue and Cornell Universities (20). The other, appearing in 1907, gives an account of the present status of agricultural education throughout the world (21).

The first Morrill Act of 1862, the second Morrill Act of 1890, and the Nelson Act of 1907 providing for government aid to agricultural and mechanical colleges are administered by the Department of the Interior (17, p. 31).

The annual payments under the acts of 1890 and 1907, are made on certifications of the Secretary of the Interior, which are based upon the proper expenditure of preceding appropriations. All of these reports required to be made by the act are collected and passed upon by the Commissioner of Education, upon whose recommendation is based the action of the secretary (17, p. 32).

While the duties of the Commissioner of Education in his relation to land-grant colleges consist chiefly in gathering statistics and making reports to the Secretary of the Interior he has opportunities for making suggestions and recommendations of importance to agricultural education. For example, in his letter of April 17, 1907, to the presidents and boards of control of state colleges of agriculture and mechanic arts he calls attention to a provision of the act of 1907 "providing for courses for special preparation of instructors for teaching the elements of agriculture and mechanic arts" and adds, "With the increasing number of secondary schools of agriculture and of industrial and trade schools, there will arise a considerable demand for specially prepared teachers to give instruction in special branches of study" (22, p. 870). In his report of 1908 to the Secretary of the Interior he gives an account of the action of several institutions taking advantage of this provision (23, pp. 740, 741).

On July 1, 1909, the Bureau appointed a specialist in land-grant college statistics who is expected also to pay attention to the general subject of agricultural education and to be able to furnish information and advice concerning that subject.

The Commissioner of Education holds an important advisory position with reference to any proposed national legislation concerning education, particularly agricultural education. During the sixtieth session of Congress several bills were introduced providing for national aid to education in agriculture and other industrial subjects. Of these the most important were the Burkett bill (S. 3,392) providing for "the advancement of instruction in agriculture, manual training, and home economics in the state normal schools of the United States," and the Davis bill (H. R. 534) providing in a similar way for national aid to agricultural and industrial education in the secondary schools only. The latter was finally revised (H. R. 18,204) so as to include the provisions of the Burkett bill (S. 3,392).

The Davis bill provides for annual appropriation of "ten cents per capita of the population of each state and territory and the District of Columbia" for aid to maintain instruction in agriculture and home economics in agriculture schools of secondary grade, and an appropriation of one cent per capita to maintain similar instruction in state and territorial normal schools (24, pp 85-87).

The large amount of money concerned, and the establishment of separate schools not already a part of our national system of education called for careful study and deliberation. The Bureau of Education was freely consulted in the matter. No one had a clearer insight into the far-reaching influence of the bill, a clearer understanding of its importance upon the economic and educational welfare of the nation, or a greater appreciation of the principles involved in such legislation, than the Commissioner of Education. In a letter dated September 26, 1907, to Mr. Davis he says:

One strong argument in favor of such national aid, when extended to special forms of education which are in special need of encouragement, may be drawn from the workings of the appropriation for support of land-grant

colleges, contained in the second Morrill Act of August 30, 1890. The recent effect of the national appropriations under that act has been to stimulate greatly the support of the land-grant colleges by the states in which they are situated.

He calls attention to a provision of the measure giving administrative authority over the appropriations therein provided to the Department of Agriculture, whereas "appropriations which are primarily for agriculture are now administered by the Department of Agriculture, and these which are primarily for education (land-grant colleges) are administered by the Bureau of Education."

I think [he says] as matters now stand this is a good working division, particularly as the relations between the Bureau of Education and the Office of Experiment Stations of the Department of Agriculture are very close and cordial. Educational interests are becoming so strongly unified throughout this country, and in fact in foreign lands, that the present tendency points to unifying of government activities of a purely educational sort, or of predominantly educational sort, under the Office of Education. Another reason for bringing the activities provided in your bill under the Bureau of Education is that they deal not only with agricultural high schools but with high schools of mechanic arts in cities as well. In institutions of both classes, while industrial ends are sought and industrial means employed, the main purpose, as I understand it, is educational.

It seems to me worth considering, also, the question whether it is advisable that rural schools, to which the bill relates, should in all cases be designated as agricultural high schools. There is still a good deal of difference of opinion as to whether high-school work in agriculture may be done to best advantage in general high schools which are properly equipped on the agricultural side, or in agricultural high schools which pay incidental attention to studies other than agriculture. It is likely, in fact, that we shall have institutions of both types for many years to come, and that both of them will do good and efficient work in the promotion of agricultural education. For this reason it seems to me doubtful whether it is wise to limit the distribution of the fund by using the distinctive designation of agricultural high school.

In a letter to Senator Proctor, dated March 4, 1908, the whole matter of national aid as proposed by the Burkett bill and by the Davis bill is carefully reviewed. The entire letter should be read in order to form a just conclusion of the Commissioner's position. After citing the difficulties arising from our complex industrial

situation, both urban and rural, he recognizes the probable need of federal aid in the following words:

For all these reasons (referring to our industrial situation) the problem of a better education of an industrial type, in both country and city, has steadily become more acute. It is extremely doubtful whether these growing needs can be met in the near future in the majority of the states, unless the encouragement of federal appropriations be added to the efforts of the states and of local communities.

While approving the measure in principle he urges "that any forward step which the national government may take in the encouragement of public education should be carefully weighed, and given its proper place in a well-digested general policy." Furthermore, the conditions in several states are widely different, and any bill should be framed with a full knowledge of these differing conditions in order that it may be made sufficiently flexible to accomplish the best results in all parts of the country. In order "to make possible for Congress to act on bills like S. 3,392 with full knowledge of the situation and needs of the country" he recommends that a commission be appointed to make a thorough investigation of the question and "report to Congress on or before January 1, 1910."<sup>1</sup>

Neither the Davis bill nor the Commissioner's recommendation became a law. The bill was an indication of the interest of the country at large in extending agricultural education into the elementary and secondary schools. The attitude of the Bureau of Education was one of accord with the general principles on which the measure was based, but at the same time one of caution, recognizing that national appropriation to agricultural education, when given, should be of the greatest possible service.

#### STATE DEPARTMENTS OF EDUCATION AND STATE LEGISLATION

Each state or territory has at the head of its school system a central office. This office is administered in most states by a state superintendent or state commissioner of education, and in

<sup>1</sup> For permission to quote from letters to Congressman Davis and Senator Proctor, and for other assistance in getting material for this paper, the writer is indebted to Commissioner Elmer Ellsworth Brown. A portion of his letter to Senator Proctor appears in the Commissioner's *Report* of 1908.

some states, as in Connecticut, Delaware, Rhode Island, and Massachusetts, by a state board of education through its secretary or commissioner (25).

These state offices vary in details and plan of organization, and somewhat in authority over educational matters, but are alike in essential respects. But however efficient the departmental organizations, the personality and aggressiveness of those in charge count for much in the influence that these offices exert in the educational welfare of their respective states.

It is especially true that the introduction of a new subject of instruction like agriculture may be greatly hindered or promoted by the attitude taken by the state office. If favorable, the subject may be recommended for legislation, it may be put in the course of study, a textbook may be adopted, through personal influence on local boards it may be introduced in certain sections of the state, interest may be aroused by making it a reading-circle subject, special publications may be issued to help teachers who wish to teach the subject, by promoting interest through clubs or other organizations. The main facts concerning the efforts of all the states and territories in the promotion of agricultural education in the elementary and secondary schools through their central offices of education and by legislation are indicated in the following tabulation.

In Delaware and Nevada interest in agricultural education has not seemed to warrant any attention from their state departments of education. Kentucky, although an agricultural state, has apparently shown much less interest in agricultural education than have other southern states. This may be readily explained by the fact that until 1908 the public-school system was organized under the old district plan. The schools were practically controlled by about 25,000 school trustees, 5,000 of whom could neither read nor write. The action of the legislature of 1908 has changed the whole aspect of the Kentucky educational situation, and already remarkable progress has been made toward the improvement of her public schools.

A glance at the tabulation shows that the southern states have been more active (at least recently) in the promotion of agri-

cultural education than the northern states. This activity is a part of the general educational movement extending throughout the South. Educational campaigns have recently been conducted in several of these states and have done much to increase interest in all educational matters.

The earliest legislation concerning introduction of agriculture into elementary schools was the Nixon law of New York in 1897 (20, 1610-14). It provided for the extension of agriculture into the public schools under the direction of the Agricultural College of Cornell University. It was carried out by means of visits to schools and lectures before teachers' institutes, and by means of teachers' and pupils' leaflets for use in rural schools. The Cornell leaflets not only stimulated much interest in elementary agriculture and nature-study in the state of New York but in other states as well. Similar publications have since been issued by agricultural colleges of several other states.

Requiring the teaching of elementary agriculture by law has not met with unqualified success. In some states where it is supposed to be in force little attention is paid to it on account of lack of qualified teachers. The establishment of state secondary schools of agriculture and provision for state aid to high schools teaching agriculture is probably the most important recent legislation concerning agricultural education. The latter form of state aid seems to be growing in favor.<sup>2</sup>

Courses of study vary much in their treatment of agriculture as a school subject. The newness of the subject is usually recognized by special directions and suggestions for teaching. These are generally given in a state school manual or handbook for teachers. In some states they are in separate publications. In New York, for example, suggestions are outlined in syllabi, one for elementary schools and one for high schools. In other states bulletins on certain phases of the subject are issued, as in Michigan.

Perhaps the most significant fact showing the widespread general interest in agricultural education in elementary and sec-

<sup>2</sup> The subject of agricultural secondary schools will be taken up in detail in a later paper of this series.



## ATTITUDE OF STATES TOWARD AGRICULTURAL EDUCATION IN ELEMENTARY AND SECONDARY SCHOOLS

## LEGISLATION AND STATE DEPARTMENTS OF EDUCATION

States	Required by Law	When Passed	Agr. High Schools	Teachers' Examination	Text- book	Course of Study	Reading Circle	Special Aid	Recommen- dations	Addenda	Addenda
Alabama.....	Yes	1903	9 Districts each \$4500 per year	Yes	Yes	Yes	.....	.....	To be given in H. S. receiving state aid	\$2,000 state aid to H. S., but each must have 5 acres of land	.....
Arizona.....	.....	.....	.....	.....	.....	.....	.....	.....	Favorable	Probably be taken up by next legislature	.....
Arkansas.....	Yes	1909	4, \$160,000 appropriated, 1909	After 1910	.....	.....	.....	Organiza- tion of boys' corn clubs	Favorable	.....	.....
California.....	Agricultural nature- study	1907	2, 1903 and 1907	.....	By counties	Optional	.....	Bulletins	Urges school gardens and agr. clubs	.....	.....
Colorado.....	.....	.....	.....	.....	.....	.....	Yes, 1908	.....	School gardens	State supt. favors legisla- tion	.....
Connecticut.....	.....	.....	.....	.....	.....	.....	.....	Directions for teach- ing agr., 1903, '06, '07, '08	By educa- tional commis- sion, 1907	.....	.....
Delaware Florida.....	Yes	1909	.....	Yes	Yes, 1909	8 grade	.....	.....	Favorable	\$65,000 for state aid to H. S., 1907, course of study to include agr.	.....
Georgia.....	Yes	1903	11 District H. S. \$77,000 1906	Yes	Yes, 1908	4-7 grades	.....	Educational campaign; Cirs. to co. supts.	Favorable	Legislature of 1907 recom- mended to Congress that Davis bill be passed	.....
Idaho.....	.....	.....	.....	.....	Yes, 1907	7-8 grades School gardens	.....	Teachers' manual	Favorable	.....	.....

Illinois.....	.....	.....	.....	.....	8 grade	Yes, 1908	Special bul. No. press bul. State manual Buls. Manual	Favorable	.....	.....
Indiana.....	.....	.....	.....	.....	7-8 grades	Yes, 1909	.....	Favorable	.....	.....
Iowa.....	.....	.....	.....	.....	.....	.....	.....	Favorable	Appropriation for extension work in agr. including teaching, 1907	Bill to re- quire agr. ed. in all agri- cultured colleges nearby passed in 1907
Kansas.....	.....	.....	.....	Recom- mended to legislature by com- mission of 1908	Yes	8 grade H. S.	Manual	Favorable	.....	.....
Kentucky.....	.....	.....	.....	.....	.....	.....	Educational campaign Organiza- tion of agr. H. S.	Favorable	.....	.....
Louisiana.....	Yes	1898	10, 1009	.....	H. S. cor- related with other sciences H. S.	.....	.....	Favorable	.....	.....
Maine.....	Forestry	1903	.....	Yes	.....	.....	.....	Favorable	One-half ex- pense for agr. teaching by in- corporated academies to be paid by state, 1909	.....
Maryland.....	Yes, at dis- cretion of State Board	1904	.....	.....	7 grade	Yes, 1902 1908	Teachers' Yearbook	Favorable	.....	.....
Massachusetts.....	.....	.....	\$10,000 annually to Smith Agr. School, 1906	.....	.....	.....	Special bul. for teachers	Favorable	\$5,000 appro- priated for training teachers in agr. college, 1907	Industrial commis- sion ap- pointed, 1906

## ATTITUDE OF STATES TOWARD AGRICULTURAL EDUCATION—Continued

State	Required by Law	When Passed	Agr. High Schools	Teachers' Examination	Text-book	Course of Study	Reading Circle	Special Aid	Recommendations	Addenda	Addenda
Michigan.....	.....	....	County, 1907; 1 organized	.....	.....	.....	.....	Sp. buls. for teachers Field work by Asst. supt. Buls. for teachers	Favorable	In 48 county normal schools agr. is required to be taught	.....
Minnesota.....	.....	....	County, 1905	.....	.....	7-8 grades	.....		Favorable	State aid to 10 H. S. giving instruction in agr. \$2,500 each	Special appropriation of \$4,000 to promote agr. instruction in rural schools, 1901; county training schools give courses in agr.
Mississippi.....	Yes	....	County, 1908; \$1,000 each	Yes	Yes	6 grade H. S.	.....	Organization of co. agr. H. S. Buls. Sp. buls. Teachers' manual	Favorable	.....	.....
Missouri.....	.....	....	.....	Yes; 1899	Yes	7-8 grades H. S.	.....		State aid to H. S. teaching agr.	.....	.....
Montana.....	.....	....	.....	Yes	Yes	5-8 grades 8 grade H. S.	.....	Boys' clubs Field work by asst. supt. Teachers' manual	Favorable 20 agr. H. S. recommended	.....	County normal schools and junior (summer) normal schools give courses in agr.
Nebraska.....	.....	....	.....	.....	Yes	.....	.....		.....	.....	.....
Nevada.....	In approved H. S.	1906	.....	For H. S. certificate	.....	H. S.	.....	Teachers' manual	Favorable	.....	.....

New Jersey.....					Sch. gar- dens	.....	Summer school at Cape May, 1909 Teachers' manual	Favorable	Recommended by Industrial Commission of 1908	.....
New Mexico.....					Yes	.....	.....	Favorable	Nixon law of 1897 provided for agr. exten- sion including public schools	.....
New York.....					Teachers in training schools	.....	Syllabus for elementary and H. S.	Favorable	.....	.....
North Carolina.....	Yes	1901	.....	Yes	7-8 grades H. S.	.....	Field work	Favorable	.....	.....
North Dakota.....			I, 1905; to include forestry after 1907	.....	7-8 grades H. S.	Yes, 1909	.....	Favorable	.....	.....
Ohio.....				.....	7-8 grades	Yes	.....	Industrial Commis- sion to be appointed by legisla- ture of 1910	.....	.....
Oklahoma.....	Yes	1908	2 supreme court dis- tricts, 1908; county, 1901	Yes	7-8 grades H. S.	.....	Sp. bulk. Teachers' manual	Appoint- ment of supt. of public schools Agricul- ture division be made for deputy county supt. of public- school agr.	.....	.....
Oregon.....	Yes	1905	.....	.....	7-8 grades H. S.	Yes	Teachers' manual	.....	.....	.....
Pennsylvania.....				.....	.....	.....	Agr. in 3 summer schools for teachers	Establish- ment of 300 tp. H. S. with agr. taught in each	.....	.....
Rhode Island. South Carolina.....	Yes	.....	.....	.....	8 grade	.....	Educational campaign	Favorable Establish- ment of agr. H. S.	.....	.....

## ATTITUDE OF STATES TOWARD AGRICULTURAL EDUCATION—Continued

State	Required by Law	When Passed	Agr. High School	Teachers' Examination	Text-Book	Course of Study	Reading Circle	Special Aid	Recommendations	Addenda	Addenda
South Dakota	.....	....	.....	.....	.....	8 grade H. S. elec- tive	.....	Meetings with school officers	Favorable	.....	.....
Tennessee	In H. S.	1907	.....	.....	Yes	H. S.	.....	H. S. in- spectors'	Favorable	.....	.....
Texas	Yes	1907	.....	Yes	Yes	8 grade H. S.	.....	Teachers' manual	Favorable	.....	.....
Utah	.....	....	.....	Yes	.....	In grades as nature- study	.....	.....	Favorable	Last legislature passed resolu- tions favoring Burkett-Pol- land bill	.....
Vermont	.....	....	.....	.....	.....	Optional but recom- mended	.....	Buls.	Favorable	.....	.....
Virginia	.....	....	.....	Choice of one of physical geography, physics, or agr.	.....	.....	.....	Organiza- tion of 10 H. S. to teach agr.	Favorable	State aid of \$2,000 each to 10 H. S. teach- ing agr.	.....
Washington	.....	....	.....	Nature- study	Yes	8 grade H. S.	Yes, 1907	.....	Favorable	.....	.....
West Virginia	Yes	1908	.....	Yes	.....	.....	Yes, 1908	Teachers' manual; special at- tention at teachers' institutes	Favorable	.....	.....
Wisconsin	Yes	1905	4 county, 1901; amended to increase to 8, 1908	Yes	.....	7-8 grades H. S.	.....	Teachers' manual organization of county H. S.	Favorable	County training schools give instruction in agr.	.....
Wyoming	.....	....	.....	.....	.....	Optional	.....	.....	Favorable	.....	.....
Totals (48 states)	Yes 18, in- cluding op- tional and forestry No. 30	.....	13 states 52 schools*	19 includ- ing nature- study	17	34 includ- ing op- tional	Yes, 8	33, prob- ably others	46	.....	.....

\*Agricultural secondary schools connected with agricultural colleges are not included in tabulation; although receiving state aid they are under control of state agricultural colleges. The first was established in 1888 in Minnesota. Similar schools are now connected with agricultural colleges of over thirty states.

ondary schools is the attitude of the administrative officers of the various state departments of education. Special mention of the subject is made in nearly all of the latest annual or biennial reports from these offices. In some reports considerable space is given to discussions of industrial education with particular reference to agriculture.

Finally, if any interpretation is to be made of the attitude of state departments of education toward agricultural education it must be remembered that these offices represent the people, and that any policy or action taken is in a certain sense an expression of public opinion.

NOTE.—The writer wishes to express his appreciation of the cordial responses which he has received from his inquiries addressed to all the state and territorial departments of education.

#### BIBLIOGRAPHY

The facts of the text dealing with legislation and state departments of education have been obtained from reports, school laws, courses of study, and other state educational publications, and from personal correspondence with the departments. As about two hundred publications have been consulted it will be impossible to give more than this general reference to these sources.

17. *The Work of the Bureau of Education*. U. S. Bureau of Education. Report of Commissioner (1907), pp. 1-36.

A short historical account is given, followed by purpose, publications, organization, agricultural and mechanical colleges, and appendix containing laws relating to Bureau, descriptions of facilities for research, education in Alaska, and statistics of maintenance of Bureau.

18. *Development of Agricultural Education*. ELMER ELLSWORTH BROWN, U. S. Department of Agriculture. Office of Experiment Stations, Bulletin 196 (1907), pp. 49-54.

An address given on the occasion of the fiftieth anniversary of the founding of Michigan Agricultural College. The Commissioner discusses the relation agricultural education bears to general education.

19. *School Gardens*. E. GANG, U. S. Bureau of Education. Report of Commissioner (1898-99), pp. 1067-84.

This is one of the best short accounts, especially from historical standpoint, published. "Contents: Historical review; sites and arrangement of school gardens; different sections of school gardens; management; instruction in school gardens; educational and economic significance of school gardens."

20. *Methods of Instruction in Agriculture*. U. S. Bureau of Education. Report of Commissioner (1897-98), pp. 1575-1616.

This chapter contains reprints of several Cornell University and Purdue University leaflets, and a report of the work at Cornell University under the Nixon law of 1897.

21. *Agricultural Education, Including Nature-Study and School Gardens.* JAMES RALPH JEWELL, U. S. Bureau of Education. Bulletin 2 (1907, revised 1909), pp. 148.

The subject is discussed under six heads: Nature-Study, School Gardens, Elementary Agricultural Education, Agricultural Education, Practical Advantages of Agricultural Education. There is also a bibliography of 134 titles, and appendices on nature observations in schools of Nova Scotia, and on the Irish system of agricultural education.

22. *Agricultural and Mechanical Colleges.* U. S. Bureau of Education. Report of Commissioner (1907), pp. 869-924.

The first part of this chapter is devoted to general statements including summary of legislation; the second part is statistical.

23. *Agricultural and Mechanical Colleges.* *Ibid.* (1908), pp. 737-69.

24. *Industrial Education.* *Ibid.* (1908), pp. 84-89.

The full text of the Davis bill (H. R. 18,204) is given.

25. *Digest of School Laws.* *Ibid.* (1904), pp. 249-518.

A condensed account of organization of all state departments of education is given and a summary of school laws from time of organization of each state department to 1904.

26. *State School Systems.* EDWARD C. ELLIOTT. U. S. Bureau of Education, Bulletin No. 3, 1906.

This contains legislation and judicial decisions relating to public education from October 1, 1904, to October 1, 1906.

27. *Idem.* Bulletin No. 7, 1908.

This contains legislation and judicial decisions relating to public education from October 1, 1906, to October 1, 1908.